Let us now cast a glance at the island's coasts. Taiwan is but little indented and consequently, in comparison with other parts of Japan, it has a modest circumference. For every 1 km. of coast in Taiwan there are 29.5 sq. km. of area (almost as much as in the case of the chief Japanese island, where the relationship is 1 km. to 29.7 sq. km.), while in Kiūshū, which is almost as large as Taiwan, there is a surface area of 10.8 sq. km. only for every one kilometer of coast. In order to consider the coast in a convenient way, we shall first travel from Kilung Harbor along the east coast, then round the southern cape and along the west coast back to the point of departure. The harbor of Kilung lies at the northern end of the island and is the most important for intercourse and trade between Taiwan and the rest of Japan. The harbor bay (Ria) of Kilung is surrounded by Tertiary sandstone hills, and the shore shows many curious small erosional formations, comparable to [226] earth pyramids, which are also formed by the ocean waves, for example the large cave near Image Point.* The harbor is about 3 km. long

*The name "Image Point was given it by an American voyager with the Perry expedition, because of the shape of the earth columns.

and is more than 18 m. deep in the middle. Here at least ten large ships of over 1,000 tons can lie unhampered. But, on the other hand, only small craft, and that only at high tide, can go on to the slimy bottom of the inner part, for at ebb tide this is

uncovered. Unfortunately the mouth of the harbor opens too widely towards the ocean in the north, and is thus not protected against the rolling sea waves, particularly at the time of the northeast monsoon. Apart from this, Kilung is the best harbor on the island, and a project for its improvement has already been submitted to the Government, great hopes being placed on the plan's execution.

9: Yamasaki--226-227 N-5 (1896-1897) 1900 Formosans
116, 133, 361, 503

When we proceed northwards from Hōryō, we find a harbor, Tōkō, at the mouth of the Tamsui-kei, a large river in southern Taiwan with a fertile basin. In the harbor, at least twenty large Chinese trading vessels always lie at anchor. Not very far to the north is a lagoon harbor, Takao, which is very famous, both because of its trade and also for the beauty and salubriousness of its location. Between the lagoon and the sea there stretches out a 12 km. long tongue of land, called Haisa ("sea sand"), on which are many fishermen's huts. At the northern end of the Haisa there rises up a crag, called Saracen's Head by the English, which was doubtless separated from the "Ape Mountain" opposite it by erosion of the sea waves. The Ape Mountain is joined by the higher Takao-san (327 m.), which is an important landmark for travelers. A narrow channel between these two hills forms the mouth of the bay and the harbor. Unfortunately the entrance to the lagoon, like the lagoon itself, is shallow so that only small steamers and junks can enter, while the [227] larger ships must anchor outside the harbor. All official buildings and foreign concessions lie beneath the Ape Mountain, while the shops of the natives are grouped opposite, at the foot of the Saracen's Head. This locality is usually called Kigo. Many mangrove trees can be found in the lagoon. They are not so large as those I later saw in Singapore. At some distance from the lagoon shore is the town of Hozan (Fŏngschan), in much the same position as Königsberg on the Danzig Haff. The two hills mentioned, Ape Mountain and Saracen's Head, consist of old coral reefs.

9: Yamasaki--227 [3] N-5 (1896-1897) 1900 Formosans
116, 133, 503

I have already referred to phenomena of elevation on the east coast; they are also to be seen on the west coast. Not only the presence of many old coral reefs and dunes in the Tainan plain, but other facts also offer proof of tectonic movement in quite recent times. On old Chinese maps we see that the harbor of Anping, which is now connected with the town of Tainan by a piece of level land, was situated on a small island almost until the beginning of the 18th century. It is also said that the Dutch ships, earlier, in the 17th century, lay to at the town wall of Tainan. This wall is now at least 8 km. from the actual anchorage.

12: Garnot--15 G-3 (1884-85) 1894 Formosans
116, 133, 503

Kelung is the center of a little coastal basin that has a radius of several kilometers. The watershed is very near the coast. Several more or less accurate maps that were drawn before the French occupation connected the Tamsui to the Kelung river at this point by a canal. As a matter of fact the watershed is more than 100 meters above sea level at its lowerst point near Loan-Loan.

42: Schetelig--385-386 T-2 (no date) 1868 Formosans
116, 501, 503

The river system of the northern part of the island of Formosa has been put to most excellent use by the Chinese, so distinguished for their skill in canal building and irrigation. From Tamsui, in the conveniently fitted up river boats, the so-called rapid boats, one can easily make a whole day's journey into the interior in three directions; 1) on the so-called Kilung Canal to within half an hour of the town of Kilung; 2) on the Tamsui River, properly speaking, upstream to the southeast and 3) on the [386] southern arm region of the western slopes of the large Central Range.

504

504 PORT FACILITIES--boathouses; piers and docks; facilities for mooring, loading, and unloading; storage facilities; supply services (e.g., ship chandlers, fueling stations); facilities for repair and overhaul; use of natural harbors; etc.

See also:

Construction 33
Ship repairs 496
Cranes 406
Weight moving 483
Warehousing 488
Trucking 494
Rail terminals 498

4:Grajdanzev--121-122 S-4 (no date) 1942 Formosans
116, 504, 177.50 Japan
636.50

"The development of shipping demands good ports, and Taiwan is poor in natural harbors. But the government did not spare money or effort in the improvement of harbors, the best of which are Keelung and Takao through which most of the island's external trade passes. In 1929 Keelung's wharves were able to accommodate fifteen ships of 3,000 to 10,000 tons each and in addition six ships could be moored within the harbor, which was capable of handling 1,650,000 tons of cargo a year. Since that time considerable improvements have been made, and a plan of reconstruction, which [122] should be finished in 1943, foresees accommodation for forty ships at one time. Up to 1939, ¥36.4 million had been spent on the improvement of the harbor. In 1929 Takao harbor could accommodate seven ships of 5,000 tons each in berths, with seven more in the narrow but long harbor; recent construction permits accommodation of vessels of 10,000 tons, and, when the program is completed, it will be possible to accommodate twenty-nine ships at once. The cost of construction up to 1939 was ¥33.5 million. The other important ports which have undergone improvements are Karenko (east)--cost of construction ¥7.4 million; Bako (the Pescadores)--¥850,000; Soo (northeast)--¥669,000; Shinko (a fishing port in the east)--¥860,000; Shinko (west), where the works are to be finished in 1942 at an estimated cost of ¥15 million."

4:Grajdanzev--122 S-4 (no date) 1942 Formosans
116, 504, 712

"Anpin, the port of Tainan, and the canal connecting it with Tainan were to be finished in March 1940 at a cost of ¥778,000. All this does not include the considerable expenditures on naval construction in Taiwan. There are three large fortified zones on Taiwan and the Pescadores, and entrance to these is prohibited."

4:Grajdanzev--190 S-4 (no date) 1942 Formosans
116, 504, 724

"The island has ten ports, some of which are very well developed (1). Large sums

1. There are also three ports on the adjacent islands, two of them of small capacity.

have been spent on improvements and installations. The military port is at Bako (Mako) on the outlying Pescadores Islands between Formosa and China, but this area has long been a prohibited area and no information concerning its facilities is available."

7: Joest--56 E-5 (no date) 1882 Formosans
116, 133, 361, 504

Unfortunately, there are no large harbors on Formosa, or rather, there are none in those places where the Chinese companies have trading posts. Taiwanfu is situated two miles from the coast; the harbor, Amping, is situated at that point where Nova Zelandia was situated formerly, but even there landing facilities for passengers and goods are very poor.

7: Joest--56 [4] E-5 (no date) 1882 Formosans
116, 504

Since the roadstead of Amping does not offer sufficient protection, the small steamer on which I had arrived took refuge in the Pescadores.

31: Hofmann--628-629 N-3 (1909) 1912 Formosans-1-2
116, 132, 137, 504

The bay and lagoon of Takao offer a beautiful sight. The lagoon is connected with the ocean by a narrow opening, hemmed in by coral reefs; large boats therefore cannot enter the bay. Work on harbor installations is still in progress; this is an ambitious and costly project, but it is a necessary step in establishing communication with the south. It will also be necessary to make the harbor safe, especially since the roadstead of Takao offers no protection even to large steamers during the frequent and violent typhoons. The most dangerous months for typhoons are June, July, and August. The direction of the wind, which may develop a velocity of 100 miles per hour, is from east to west. For those harbor installations which are made of wood, the Teredo navalis is extremely destructive. Pine wood may be destroyed by these worms within three months, while Chamaecyparis wood may last for one year. Timber which is used for buildings on land (for railways, telegraph poles, etc.) is destroyed by white termites, but if the wood is impregnated with tar, this forms a sufficint, though costly, protection. The bay within the lagoon is about 22 kilometers long and 5 kilometers wide at its widest point. Around the bay there are artificial sea gardens. Among the plants growing wild there are first of all pandanus groves, which probably form one of the most unusual features in the vegetation of Formosa; while in other regions of the island pandanus grows only in the form of shrubs here it is tree-like and forms a plant typical of coastal regions.

Another unusual form of vegetation of a purely xerophilous character is a species of

tropical Euphorbia Tirucalli (spurge); here it has hardly any leaves, since their place is taken by green branches. Its habitat is among the rocks on the beach, and it may grow as high as ten meters. [629] Finally, there are several species of mangrove along the level coast of the lagoon of Takao.

42 Schetelig--387 [2] T-2 (no date) 1868 Formosans
116, 114, 177, 504

The harbor of Sawo has been repeatedly visited by warships and on some occasions by trading vessels, generally only for passing protection against wind and weather or in order to survey the coast. The transport "Elbe," belonging to the Prussian fleet, was also there in 1860 (1). Shortly before us the "Sylvia" had left the harbor, this being

1. This is a mistake, commited also by Dr. Hermann Maron, Japan und China, Berlin 1863, Vol. II, p. 73. The "Elbe" touched only at the south and southwest coasts of Formosa, but the Prussian frigate "Thetis" was involved in an incident with Chinese pirate junks in the neighborhood of Sawo Bay (see Die preuss. Edpedition nach Ost-Asien, Vol. II, 1866, pp. 112 ff.).

an English survey ship which, be it remarked in parenthesis, has just now finished the survey of the Formosan coast begun about one and one half years ago. This survey will considerably transform the shape of the west coast on the map.

42: Schetelig--387-388 T-2 (no date) 1868 Formosans
116, 133, 504

The harbor of Sawo is deep, in places 10 fathoms deep; It is protected on the south, west and north, but entry is rendered much more difficult by many sandstone rocks. The place itself appears to be hewn out of the rock, for on all sides the mountains sink precipitously into the sea, and even the small valley in which the village of Sawo is situated is only about 1/4 of a German mile long and much narrower. [388] Behind, in rapid succession, steep mountains rise up, the first chain already rising to a height of 2,000 feet.

Kaohsiung

504 712 [439] Kaohsiung is the second largest city and is known for its harbor and large-scale industries. It has a population of 300,000. Because of its warm and rather dry climate, this port handles a major portion of the island's sugar, salt, and cement exports. The naval base of Tsoying is located in the city and the military fort, Fengshan, another important military base, is about six miles north of the city limits.

Makung

712 633 Makung, located in the west of the main island of the Pescadores, is an important naval base and the seat of the Penghu hsien government. The fact that this port lies in the Formosa Strait and between the China Mainland and Taiwan gives it strategic importance.

504 There are only two important natural harbors, Keelung and Kaohsiung. Almost all foreign shipping passes through these two ports. Coastal shipping is carried on largely through ports of secondary importance such as Hualien, Suao, Makung, Tanshui, Anping, Lukang, Tungkang, Taitung, and Hsinkang. These harbors with the exception of Hualien, are only capable of accomodating small vessels and fishing boats.

506 Domestic air transport is in its infancy. International air lines connect with the United States, Japan, Korea, Hong Kong, the Philippines, and Thailand.

II. RAILWAY TRANSPORT

507 The Formosa railway constitutes the foundation of the island's transportation system. However, its position is in process of being challenged by increasing activity in highway transportation. The government-owned Taiwan Railway Administration (TRA) operates an extensive network of lines called the Western System and the single-tracked line which forms the Eastern System. Taiwan Sugar Corporation also operates railroad lines totaling 1,543 miles (2,649 kilometers). The 30" tracks of the sugar corporation extend over sugar-producing areas for the purpose of transporting sugar cane, supplies, and fertilizers.[1] In addition, this system offers passenger service. The Taiwan Forestry Administration owns, besides a number of small narrow gauge railways, three lines of 30"gauge, used for the transporation of lumber and a few passengers; these lines connect Chiayi with the

1. Foreign Operation Adm., Mission to China, Taiwan Economic Data Book, Part II, Vol. III, 1955, Taipei.

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien
Formosa AD1

With the advent of the Japanese in 1895, Lukang very soon lost its importance as a port, for Japan's plans for the colonization of Taiwan did not include maintaining Lukang as a trade and immigration center. The Japanese set about cutting off the movement of people and goods between Taiwan and the mainland, and, to divert the colony's trade from China to Japan, they built the port of Keelung in northern Taiwan (Barclay, 1954b:12, 18–42). The demise of Lukang both as a port and as a major urban center was hastened by the silting up of the harbor, which had begun even before the coming of the Japanese. As a result of Japanese indifference to Lukang as a port, the harbor soon became unusable.

The final blow by which the Japanese doomed Lukang's importance was the routing of the extensive west coast railroad system far from Lukang. The city could then neither be maintained as a major market town nor as a point of trans-shipment for the area's produce. Its decline as an urban center and as an influence on the surrounding area was reflected in an accompanying population decrease from one hundred thousand in the late eighteenth century to fifty-one thousand in 1954 (*Women te Lukang Chen*, 1954). The decrease took place despite the high rate of population growth in the rest of Taiwan.

Today, Lukang stands several miles from the sea, a city much diminished in size and importance. It offers little economic opportunity for its inhabitants, and despite some light industry, few village people are employed there. Nevertheless, although it is now a small, out-of-the-way city, it offers nearby villagers a convenient local marketplace and a center for some entertainment. Most important, it still functions as a religious center. From the earliest times the Chinese immigrants brought their gods with them from the mainland to Taiwan. These gods and goddesses, such as Matsu, became firmly established as important deities in Taiwan; the Matsu temple in Lukang is believed by the people of the area to be the oldest or second oldest Matsu temple on the island. For this reason Lukang is still one of the most important focal points for the religious pilgrimages of those who maintain loyalty to the Goddess Matsu.

The historical picture of this area at the time of the late Ch'ing dynasty comes from data furnished by older or better educated residents of the area and several local Chinese and Japanese gazetteers.[3] These various sources were used, wherever possible, to corroborate one another. The sources note that in the late nineteenth century the area was sparsely populated and that its inhabitants lived in constant fear of bandits. Up to the early part of the twentieth century dry farming produced most of the staples grown, since there was only a very limited system of irrigation. Crops like wheat, soybeans, sorghum, sweet potatoes, peanuts, a plant used to make dye for cloth, and broom grass were

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5
Formosa AD1

THE HISTORY OF THE VILLAGE AND AREA

The village seems to have been founded about 1785. This estimate is based on the five generations of ancestors listed on the ancestral tablets of the family considered by other villagers to be the oldest in Hsin Hsing. The first generation recorded on the master tablet, in each case, is said to be the founder of that particular descent line in the village.

The ancestors of the village, like much of the Taiwanese population, originally came from the Amoy area of Fukien. While the exact origin for the ancestors of most Taiwanese is either the Ch'uan Chou area north of Amoy or the Chang Chou area south of Amoy, almost all the ancestors of the people in the Hsin Hsing village area came from Ch'uan Chou.[2] Some informants believe that their ancestors came from the mainland directly to this village. Others think they might have first lived nearby and then moved into the village. There is almost complete agreement, however, that all the ancestors entered Taiwan through the port city of Lukang, only about three miles from Hsin Hsing, which has long played an important role in the life of the area.

Early in the Chinese history of Taiwan—beginning in the middle 1660's—Lukang was an important port city, second only to Tainan to the south. In fact, up to the time of the Japanese occupation of the island, Lukang was a major Taiwanese culture center. It reached its peak of activity from about 1786 to 1851, when it was the chief port of entry for many of the immigrants from the mainland and was of major importance to Taiwan's trade.

In this early period Lukang was a highly urban settlement. The city's prosperity was at its height during the Ch'ing dynasty in the late eighteenth century, when its population reached one hundred thousand. At that time a hundred ships (each ship under forty-seven tons) went in and out of the port every day, and the city's many narrow, cobblestoned streets were flanked by rows of shops selling such commodities as salted and dried fish, cloth, and other products.

In addition to its prominence as a port, Lukang also served as an important labor center and general marketplace for the surrounding area. Men from nearby villages who found that the low yield of the dry, non-irrigated land could not furnish an adequate income found ample opportunity for work in Lukang in the shops or as coolie laborers in the city's port facilities. The livelihood of many of the villagers of the area therefore depended in large part upon their labor in Lukang, and thus the city, only about three miles from Hsin Hsing, very early served as a source of urban influence.